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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,531	01/12/2006	Guofu Zhou	NL030838	1851
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EXAMINER				
SITTA, GRANT				
ART UNIT		PAPER NUMBER		
2629				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,531

Applicant(s)

ZHOU ET AL.

Examiner

GRANT D. SITTA

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 1/12/2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter.

Claim 10 recites "a computer program product", which is directed to a program, and programs fail to fall within a statutory category of invention. As such, claim 10 is non-statutory.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,6, 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Katase et al (2002/0021483) hereinafter, Katase.

4. In regards to claim 1, Katase teaches an electrophoretic display unit (1) comprising: an electrophoretic display panel (DP) comprising pixels (fig. 2 (1)) (11); drivers (fig. 3 (140A) and (130A)) (30, 40); and a controller (fig. 3 (400A)) (20) for

controlling the drivers (**fig. 3 (140A) and (130A)**) (30, 40) for addressing the pixels (11) once during a sequence of frame periods (**fig. 11 Tw [0124-0126]**).

5. In regards to claim 9, Katase teaches a method for driving an electrophoretic display unit (1) comprising an electrophoretic display panel (DP) comprising pixels (**fig. 2 (1)**) (11); and drivers (**fig. 3 (140A) and (130A)**) (30, 40), the method comprising the step of: controlling the drivers (**fig. 3 (400A)**) (30, 40) for addressing the pixels (11) once during a sequence of frame periods (**fig. 11 Tw [0124-0126]**).

6. In regards to claim 10, Katase teaches a computer program product for driving an electrophoretic display unit (1) comprising an electrophoretic display panel (DP) comprising pixels (**fig. 2 (1)**) (11); and drivers (**fig. 3 (140A) and (130A)**) (30, 40), the product comprising the function of: controlling the drivers (**fig. 3 (400A)**) (30, 40) for addressing the pixels (11) once during a sequence of frame periods (**fig. 11 Tw [0124-0126]**).

7. In regards to claim 11, Katase teaches a controller (20) for controlling drivers (**fig. 3 (400A)**) (30, 40) for addressing pixels (11) of an electrophoretic display panel (**fig. 2 (1)**) (DP) of an electrophoretic display unit (1), the controller (**fig. 3 (400A)**) (20) being

adapted for addressing the pixels (11) once during a sequence of frame periods (**fig. 11 Tw [0124-0126]**).

8. In regards to claim 6, Katase teaches an electrophoretic display unit (1) as claimed in claim 1, further comprising a memory coupled to the controller (20) for storing information about a time-interval (T.sub.1,T.sub.2,T.sub.3,T.sub.4,T.sub.5,T.sub.6,T.sub.7,T.sub.8) forming the sequence of frame periods (**fig. 19 (301) memory [0170]**).

9. In regards to claim 8, Katase teaches a display device comprising an electrophoretic display unit (1) as claimed in claim 1; and comprising a storage medium for storing information to be displayed **[170]. Examiner note electrophoretic devices are storage mediums.**

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katase in view of Machida et al (6,753,844) hereinafter, Machida.

13. In regards to claim 2, Katase discloses the limitations of an electrophoretic display unit wherein the controller (fig. 3 (300 and 400)) (20) is adapted to provide; one or more reset pulses (R) (**fig. 11 (Tr)**); and one or more driving pulses (Dr) (**fig. 11 (Tw)**).

Katase differs from the claimed invention in that Katase does not disclose expressly disclose using shaking pulses.

However, Machida teaches a system and method for using shaking pulses. (fig. 1 (10) and fig. 9 initializing drive pulses).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Katase to include the use of shaking pulses as taught by Machida in order to provide a clear, high contrast display with no image degradation as stated in (col. 2, lines 49-56 and col. 3, lines 16-35 of Machida).

14. In regards to claim 3, Katase teaches an electrophoretic display unit (1) as claimed in claim 2, wherein the sequence of frame periods is formed by a time-interval (T.sub.1,T.sub.2,T.sub.4,T.sub.5,T.sub.6) for providing the one or more reset pulses (R) **(fig. 11 Tr [0120-0123])**.

15. In regards to claim 4, Katase teaches an electrophoretic display unit (1) as claimed in claim 2, wherein the sequence of frame periods is formed by a time-interval (T.sub.3,T.sub.7,T.sub.8) for providing the one or more driving pulses (Dr) **(fig. 11 Tc and Tw [0273])**.

16. In regards to claim 5, Katase as modified by Machida teaches an electrophoretic display unit (1) as claimed in claim 2, wherein the sequence of frame periods is formed by a time-interval **(fig. 11 Tc and Tw Katase)** for providing the shaking pulses (Sh.sub.1,Sh.sub.2) **((fig. 1 (10) and fig. 9 initializing drive pulses Machida)**.

17. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katase in view of Danner et al (7,193,625) hereinafter, Danner.

18. In regards to claim 7, Katase discloses the limitations of an electrophoretic display unit (1) as claimed in claim 1, the pixels (11) being arranged in lines of pixels

(11)(fig. 3 (Y1)), the drivers (30,40) comprising a line driver (40)(fig. 3 (140A and 130A X1-X7)), the controller

Katase differs from the claimed invention in that Katase does not expressly disclose (20) being arranged for skipping the addressing of a line of the lines of pixels (11) during the sequence of frame periods if all pixels (11) of the line of pixels (11) have to remain unchanged.

However, Danner teaches a system and method for (20) being arranged for skipping the addressing of a line of the lines of pixels (11) during the sequence of frame periods if all pixels (11) of the line of pixels (11) have to remain unchanged. ("**selective row driving**" col. 17, lines 30-67 of Danner).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Katase to include the use of selective row driving as taught by Danner in order to save power as stated in (col. 17, lines 30-67 of Danner).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GRANT D. SITTA whose telephone number is (571)270-1542. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629
/Grant D Sitta/
Examiner, Art Unit 2629
March 3, 2009